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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|--|-------------|-----------------------|-------------------------------|------------------|
| 10/719,613   | 11/21/2003  | Jason Matthew English | KCC 4947 (K-C 18, 027)        | 3131             |
| 321  | 7590        | 01/12/2007            |                               |                  |
| SENNIGER POWERS<br>ONE METROPOLITAN SQUARE<br>16TH FLOOR<br>ST LOUIS, MO 63102 |             |                       | EXAMINER<br>BOGART, MICHAEL G |                  |
|  |             |                       | ART UNIT                      | PAPER NUMBER     |
|  |             |                       | 3761                          |                  |

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|--|-------------------|---------------|
| 3 MONTHS                               | 01/12/2007        | ELECTRONIC    |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/719,613 | <b>Applicant(s)</b><br>ENGLISH ET AL. |  |
|                              | <b>Examiner</b><br>Michael G. Bogart | <b>Art Unit</b><br>3761               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-16,18-25,28-41 and 44-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-16,18-25,28-41 and 44-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections – 35 USC § 103*

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

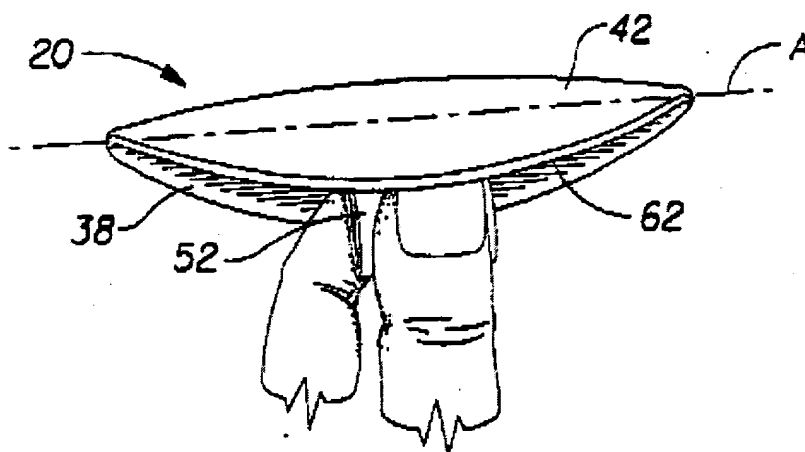
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 24, 25, 28-33, 36-41, 44-48, 51-55 and 60-63 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bewick-Sonntag *et al.* (US 2003/0191442 A1) in view of Dulle (US 3,856,013), Zelazoski *et al.* (US 5,536,555 A; hereinafter “Zelazoski”) and Brandt *et al.* (US Re. 32,649, hereinafter “Brandt”).

Bewick-Sonntag *et al.* disclose the claimed invention except for the specifically claimed performance test vectors (saturation capacity, retention capacity, intake time, gel stiffness index, rewet) and various physical parameters including percent by weight of superabsorbent, article length and width, absorbent structure basis weight, absorbent structure density and thickness (see

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figure 4, below)(paragraphs 0110-0115, 0309 and 0310). While parameters such as length, density and thickness are structural limitations, the claimed test parameters are functional, not structural limitations. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). MPEP § 2114.



Generally, optimization of ranges of test characteristics or parameters such as size, temperature, concentration or density will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such test characteristics or parameters are critical. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or

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workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Regarding claims 24, 25, 30, 39-41, 54 and 55, the benefits of optimizing saturation capacity is taught by Dulle, which teaches that maximizing saturation capacity of an absorbent article aids in preventing the article from exceeding that capacity, beyond which it can not absorb more fluid (col. 2, lines 37-59). The benefits of optimizing retention capacity is taught by Brandt, which teaches that maximizing the total fluid capacity of an absorbent article is desirable (col. 1, lines 38-55). The benefits of optimizing intake and rewet time is taught by Zelazoski, which teaches that minimizing the amount of time for a material to uptake fluids and to minimize any rewetting is desirable (col. 19, lines 1-43). These secondary references show that was known to be desirable to optimize these parameters, making the claimed values result-effective variables. One of ordinary skill in the art would have recognized that increasing capacity and/or retention, intake time and rewet performance would allow the absorbent article to larger fluid insults or fluid insults of longer duration and avoidance of rewet when the article is in use.

Further regarding claim 24, the benefits of optimizing the amount of superabsorbent, the structure's basis weight and density would have been known to one of ordinary skill in the art prior to the instant invention. Increasing the amount of superabsorbent, and the article's density provides for increased absorbent capacity, while decreasing these values increases the rate at which liquid can be absorbed.

Regarding claims 37, 38, 52 and 53, Brandt teaches that the benefits of optimizing the gel stiffness or resistance of the article to deformation while under load would have been known to one of ordinary skill in the art prior to applying the gel stiffness index test (col. 1, lines 38-55).

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One of ordinary skill in the art would have recognized the increasing the article's resistance to deformation underload would result in less leakage after a fluid insult while an absorbent article is being worn.

Regarding claims 26-29, 31 and 44-46, the benefits of optimizing the weight % of superabsorbent, the density and/or basis weight of the absorbent structure, the length and thickness of the absorbent structure would have been known to one of ordinary skill in the art. This is because human females upon which such absorbent articles are placed very considerably in size and weight and have variable flow conditions, all of which will require optimization in terms of the size of the absorbent article and the amount of absorbent material that must be packed into that article. Other factors that would come into play would be overall article flexibility and materials cost.

Regarding claims 32 and 47, Bewick-Sonntag *et al.* teach an absorbent article (20) comprising a permeable topsheet (42) and an impermeable backsheet (38) enveloping an absorbent core (44)(figure 4).

Regarding claims 36 and 51, Bewick-Sonntag *et al.* teach an absorbent structure that is of unitary construction (one piece).

Regarding claims 33 and 48, Bewick-Sonntag *et al.* teach an absorbent article (20) having a predetermined axis of flexure (X)(see figure 4, supra).

Claims 1, 3, 4, 6-16, 18-23, 34, 35, 49, 50 and 56-59 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bewick-Sonntag *et al.*, Dulle, Brandt and Zelazoski as applied to claims 24, 25, 28-33, 36-41, 44-48, 51-55 and 60-63 above, and further in view of Bewick-Sonntag *et al.* (US 5,836,929 A; hereinafter '929).

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Bewick-Sonntag *et al.*, Dulle, Brandt and Zelazoski do not expressly disclose an absorbent structure comprising a homogeneous mixture of hydrophilic fibers and superabsorbent.

'929 teaches an absorbent article having an absorbent core made from a blend of hydrophilic fibers and superabsorbent (claim 10). This provides favorable loft and absorption characteristics.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use '929's absorbent core construction in the labial pad of Bewick-Sonntag *et al.*, Dulle, Brandt and Zelazoski in order to provide good absorptive ability.

Regarding claims 1, 7, 22 and 23, the benefits of optimizing saturation capacity and/or retention capacity, intake time and rewet would have been known prior to applying a test, making these values result-effective variables. One of ordinary skill in the art would have recognized that increasing capacity and/or retention, intake time and rewet performance would allow the absorbent article to larger fluid insults or fluid insults of longer duration and avoidance of rewet when the article is in use. See the detailed discussion of the rejection under Bewick-Sonntag *et al.*, Dulle, Brandt and Zelazoski, *supra*.

Regarding claims 1 and 17, Bewick-Sonntag *et al.* teach an absorbent article (20) comprising a permeable topsheet (42) and an impermeable backsheet (38) enveloping a separate absorbent core (44)(figure 2, *infra*).

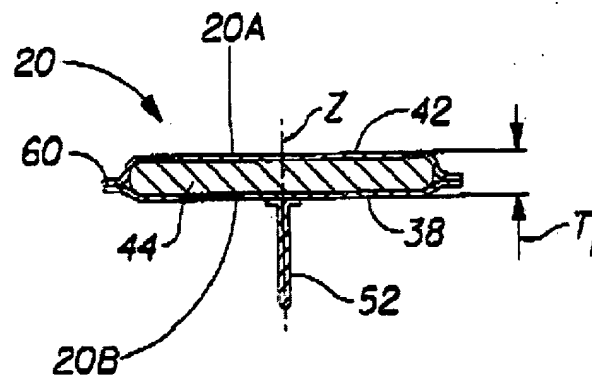


Fig. 2

Regarding claims 1 and 6, the benefits of optimizing the gel stiffness or resistance of the article to deformation while under load would have been known to one of ordinary skill in the art prior to applying the gel stiffness index test. One of ordinary skill in the art would have recognized the increasing the article's resistance to deformation under load would result in less leakage after a fluid insult while an absorbent article is being worn. See the detailed discussion of the rejection under Bewick-Sonntag *et al.*, Dulle, Brandt and Zelazoski, *supra*.

Regarding claims 1, 3, 4, 8-16 and 18, the benefits of optimizing the weight % of superabsorbent, the density and/or basis weight of the absorbent structure, the length and thickness of the absorbent structure would have been known to one of ordinary skill in the art. This is because human females upon which such absorbent articles are placed very considerably in size and weight and have variable flow conditions, all of which will require optimization in terms of the size of the absorbent article and the amount of absorbent material that must be packed into that article. Other factors that would come into play would be overall article flexibility and materials cost.



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Regarding claims 21, Bewick-Sonntag *et al.* teach an absorbent structure that is of unitary construction (one piece).

### ***Response to Arguments***

Applicant's arguments filed 31 October 2006 regarding the rejections under 35 USC § 103 have been fully considered but they are not persuasive.

Applicants assert that Bewick-Sonntag does not teach the instantly claimed concentration of superabsorbent fiber. This argument is not persuasive, because as detailed supra, it would have been obvious to one of ordinary skill in the art to optimize the concentration of superabsorbent in the references as combined. See *In re Aller*, supra.

Regarding claim interpretation, the paragraph bridging pages two and three of this Office action now specifically enumerates which limitations are considered to be functional and which are considered to be structural limitations.

Applicants assert that *In re Schreiber* has been misapplied and that the functional limitations should be given weight by the Examiner. This argument is not persuasive because *In re Schreiber* is cited to indicate that some of the limitations are interpreted as being functional. The functional limitations have been given weight in the rejection supra. The rejections are not based on the applied references inherently performing those functions according to the claimed ranges of values, they are based on the interpretation that it would have been obvious to optimize those functional limitations in the manner instantly claimed.

Applicants assert that it would not have been obvious to optimize the saturation capacity and retention capacity of the combined references. Applicants assert that Dulle does not teach

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that saturation capacity be maximized. This argument is not persuasive because Dulle teaches that exceeding saturation capacity is undesirable because every drop of liquid added to an absorbent article beyond that point requires a drop to leave the absorbent article (col. 2, lines 56-60). This at least implies one of two solutions to avoid exceeding saturation capacity, increasing the saturation capacity or decreasing the amount of liquid that is absorbed by the article. “[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Applicants assert Brandt does not teach that it is desirable to maximize retention capacity made from this specific superabsorbent material. This argument is not persuasive because Brandt is applied to show that maximizing the retention capacity of a superabsorbent in general. This concept is applied to the specific superabsorbent taught by the ‘929 patent (claim 10) to show that it would be obvious to increase the capacity of that superabsorbent structure.

Applicants assert that Bewick-Sonntag teaches using a greater superabsorbent concentration that would be greater than that which is claimed. This argument is not persuasive because looking at the references as a whole, one of ordinary skill in the art would see the benefit of maximizing capacity within obvious constraints such as the size, thickness, weight, flexibility as well as competing performance vectors. These concerns are directly related to how comfortable and practical the article is during use. Maximizing the performance capacity within such constraints is optimization of the capacity.

Applicants assert that with respect to intake and rewet properties, Zelazoski only applies to body-side liners or topsheets, not absorbent structures having superabsorbent. Applicants also assert that Zelazoski teaches the desirability of minimizing intake performance. This argument is not persuasive because Zelazoski is applied for showing the desirability of maximizing the speed of (or minimizing the time of) liquid intake and minimizing the amount of rewet (or maximizing rewet performance) in absorbent articles generally.

Applicants assert that Bewick-Sonntag fails to teach the claimed saturation capacity combined with the retention capacity and intake time of the instant invention. This argument is not persuasive, because as detailed in the rejection supra, the combination of Bewick-Sonntag with the secondary references shows that it would have been obvious to optimize their relevant performance vectors.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bogart whose telephone number is (571) 272-4933.

In the event the examiner is not available, the Examiner's supervisor, Tatyana Zalukaeva may be reached at phone number (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for formal communications. For informal communications, the direct fax to the Examiner is (571) 273-4933.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-3700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Michael Bogart  
7 January 2007

**TATYANA ZALUKAEVA**  
**SUPERVISORY PRIMARY EXAMINER**

